

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:	Seiki TAMURA	Attorney Docket No.:	071051.00011
Serial No.:	10/540,816	Confirmation No.:	6348
Filed:	June 24, 2005	Group Art Unit:	1619
Examiner:	MATTISON, Lori K.		
Title:	HAIR CARE COMPOSITION		

REPLY BRIEF

Mail Stop Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450

Dear Sir:

Subsequent to the mailing of an Examiner's Answer on March 30, 2010, Appellants now submit a Reply Brief in accordance with 37 CFR § 41.41 in response to the Examiner's Answer. Because this Reply Brief is being filed within two months of the Examiner's Answer, it is believed that no additional fees are due.

REMARKS

Procedural Issues

Appellants note the Examiner contends the summary of claimed subject matter contained in Appellants' Brief on Appeal ("Appeal Brief") is deficient for failing to provide support for the mass percentage of block copolymer A in the claimed composition. Appellants improperly cited paragraph [0022] of the subject application as published, rather than paragraph [0063], for such support. The Appellants thank the Examiner for pointing out this unintentional error, and for pointing out that the instant specification provides adequate support for the mass percentage of block copolymer A in the claimed composition in paragraph [0063] of the subject application as published. In addition, the Appellants thank the Examiner for correcting the Appellants' typographical error with respect to the primary reference upon which the Examiner's rejection relies, i.e., U.S. Pat. No. 6,187,891 rather than U.S. Pat. No. 6,287,891.

Substantive Remarks

The Examiner consistently argues throughout the Examiner's Answer, as well as the previously issued Office Actions, that U.S. Pat. No. 6,187,891 to Rautschek et al. (the '891 patent) teaches Appellants' claimed block copolymer A. The Examiner's Answer added little to the Examiner's position, and merely regurgitated the extensive picking and choosing required to arrive at the Appellants' claimed species in view of the genus disclosed in the '891 patent. Though the Examiner has continuously defended that extensive picking and choosing is not required to arrive at Appellants' claimed species based on the genus disclosed in the '891 patent, it is notable that the Examiner does not even address the Appellants' argument until the bottom of Page 8 of the Examiner's Answer; the Examiner

again sets forth a complex process spanning at least four entire pages, which is required for arriving at the Appellants' claimed species based on the absence or presence of particular optional moieties, the selection of particular substituents, the repetition of blocks, and so forth, within the genus disclosed in the '891 patent.

In the Appellants' Appeal Brief, the Appellants set forth the chemical formula of the genus disclosed by the '891 patent based on the respective teachings relating to subunits "A," "B," and "C" in the '891 patent. (See page 15 of the Appeal Brief). In response to this chemical formula, the Examiner contends, in the Examiner's Answer, that the "Appellant's representation of the copolymer taught by the '891 application [sic] is in error . . . the '891 prior art teaches and embodies the exclusion of the $[\text{CH}_2\text{CH}(\text{CH}_2\text{CH}_3)\text{O}]_c$ moiety from the polymer." (See page 9 of the Examiner's answer). The Appellants respectfully disagree with the Examiner with respect to the genus taught by the '891 patent, and note that excluding a moiety from the genus misrepresents the breadth of the genus of the '891 patent.

In fact, contrary to the Examiner's assertion, the Appellants properly represented the genus disclosed by the '891 patent. While it is true that the $[\text{CH}_2\text{CH}(\text{CH}_2\text{CH}_3)\text{O}]_c$ moiety may be excluded from the polymer of the '891 patent, it is also true that the '891 patent expressly teaches that the $[\text{CH}_2\text{CH}(\text{CH}_2\text{CH}_3)\text{O}]_c$ moiety may be present, and may even repeat up to 200 times. (See column 2, lines 55-62 of the '891 patent). The Examiner has also failed to appreciate that, like the optional $[\text{CH}_2\text{CH}(\text{CH}_2\text{CH}_3)\text{O}]_c$ moiety, the '891 patent teaches that the $[\text{CH}_2\text{CH}_2\text{O}]_a$ and $[\text{CH}_2\text{CH}(\text{CH}_3)\text{O}]_b$ moieties of the '891 patent may be excluded (or may be repeated up to 200 times, respectively), yet the Examiner has included these optional moieties in the Examiner's asserted genus while excluding another optional moiety. (See column 2, lines 55-62 of the '891 patent). As such, in

suggesting that the Appellants erred in setting forth the proper chemical formula of the genus by the '891 patent, the Examiner improperly narrowed the genus taught by the '891 patent by selectively excluding a particular optional moiety and including other optional moieties, thereby misrepresenting the breadth of the genus taught by the '891 patent. (See page 9 of the Examiner's Answer). Thus, the Examiner's asserted "generic structure" of the '891 patent is incorrect and improper. The Examiner's asserted generic structure is not representative of the genus disclosed by the '891 patent, because to arrive at the Examiner's asserted generic structure, the Examiner has already made a selection with respect to the presence or absence of three different optional moieties taught by the genus disclosed by the '891 patent. Clearly, unduly narrowing the genus of the '891 patent adversely impacts the obviousness analysis, which examines the number of species encompassed by the genus taking into consideration all of the variables possible, as described in greater detail below.

In the Appellants' Appeal Brief, the Appellants also pointed out that the Examiner had improperly construed Appellants' elected species R². In particular, Appellants pointed out that subunit A of the '891 patent is written in the opposite order as the elected species R² of the subject application, in which the first moiety, i.e., Y¹, is bivalent. It is clear from the Examiner's answer that the Examiner believed the Appellants, on the basis of this distinction in and of itself, were attempting to traverse of the rejection over the '891 patent. This was not the case. Rather, Appellants noted, and continue to note, this distinction is yet another consideration relevant to finding nonobviousness of the species claimed in the subject application over the genus disclosed in the '891 patent. The claimed invention is not merely a position isomer of a disclosed species in the '891 patent, as suggested by the Examiner. Instead, the claimed invention is a species of a

genus which includes, which are distinguishable in many ways, including the order in which the atoms in subunit A are arranged. This distinction clearly shows that to arrive at the claimed species based on the genus disclosed in the '891 patent, one of skill in the art would not only have to extensively pick and choose the presence of absence of particular optional moieties, the number of repeating units, and specific substituents based on the broad genus of the '891 patent, but one of skill in the art would also have to modify terminal group of the broad genus such that the moieties within the terminal groups are rearranged. This distinction further weighs against a finding of obviousness of the claimed invention pursuant to the test explicitly set forth in the MPEP, as described immediately below.

As set forth in MPEP § 2144.08, and on page 24 of the Appellants' Appeal Brief, the Examiner should make four findings where the prior art has disclosed a genus. Not only did the Examiner preliminary fail to make such findings, but the Examiner failed to address these findings in the Examiner's Answer in response to the Appellants' Appeal Brief, and merely fell back on original arguments from the Examiner's Office Actions (which were already inadequate for not relying on the proper test set forth in the MPEP).

In particular, where the prior art has disclosed a genus, "Office personnel should make findings as to:

(A) the structure of the disclosed prior art genus and that of any expressly described species or subgenus within the genus;

(B) any physical or chemical properties and utilities disclosed for the genus, as well as any suggested limitations on the usefulness of the genus, and any problems alleged to be addressed by the genus;

(C) the predictability of the technology; and

(D) the number of species encompassed by the genus taking into consideration all of the variables possible.” (emphasis added) MPEP § 2144.08. To prevent this Reply Brief from being wholly duplicative of the Appeal Brief, Appellants’ arguments relating to these findings are not repeated herein. However, the Examiner’s responses to certain criteria are addressed below.

With respect to criterion (B), the Appellants noted and argued that the preamble of independent claim 1 expressly claims “a composition for hair.” Clearly, this is an intended use (or the utility) of the claimed invention. Conversely, as set forth in the Summary section of the ‘891 patent, the ‘891 patent is directed toward polymers for “use as foam stabilizers, antifoams and/or in formulations which act as antifoams, as additives for solvent-based coatings, low-solvent coatings, and solvent-free aqueous coatings, construction chemicals, [and] paste . . .” (emphasis added). In response to the clear distinction between the utilities of the claimed invention and the ‘891 patent, the Examiner contends “the recitation ‘a composition for hair’ has not been given patentable weight because the recitation occurs in the preamble.” (See page 16 of the Examiner’s Answer). This is a misguided approach to criterion (B). There is no language requiring that the disclosed utilities of the genus (as of the claimed species) be claim limitations; the test is not to merely weigh claimed distinctions between the claimed invention and the prior art disclosure. Such an interpretation undermines the whole purpose of the test set forth in the MPEP, which considers the totality of the circumstances. The Examiner is again respectfully reminded that “[t]he fact that a claimed species or subgenus is encompassed by a prior art genus is not sufficient by itself to establish a prima facie case

of obviousness.” (emphasis added) *In re Baird*, 16 F.3d 380, 382, 29 USPQ2d 1550, 1552 (Fed. Cir. 1994).

The Examiner has also erred with respect to criterion (D) by unduly limiting the breadth of the genus of the ‘891 patent, as described above, by preliminarily picking and choosing the presence or absence of optional moieties in defining the genus disclosed by the ‘891 patent. The Examiner also relies on the breadth of the genus disclosed by the ‘891 patent while failing to appreciate the potentially infinite number of species encompassed by this genus. For example, the ‘891 patent teaches that its R^3 substituents “may be any substituted, unsubstituted, saturated, and/or unsaturated hydrocarbon radicals having from 1 to 20 carbon atoms.” (See column 2, line 65 – column 3, line 1 of the ‘891 patent). The breadth of the language of “substituted, unsubstituted, saturated, and/or unsaturated” by itself encompasses thousands of potential substituents having various ethylenically unsaturated groups and substituted groups and/or atoms, and this is but one of the many substituents present in the disclosed genus, without regard to the additional number of species encompassed by the genus of the ‘891 patent via other variable factors, such as the presence or absence of optional moieties, number of repeating units, etc. Conversely, R^1 of the subject application, which the Examiner correlates to R^3 of the ‘891 patent, is selected from univalent hydrocarbon groups free of aliphatic unsaturation, hydroxyl groups (which, clearly, do not even include carbon atoms), and alkoxy groups. Merely seeing that one of the Markush members of the Appellants’ Markush group falls within the encompassing language of the genus of the ‘891 patent fails to properly take into consideration the potentially infinite number of substituents disclosed by the ‘891 patent, let alone those which are unsuitable for the claimed invention (such as those with aliphatic unsaturation).

Not only are the substituents of the genus all encompassing, but the presence or absence of optional moieties, as well as the number of repeating units, also creates potentially infinite numbers of species within the genus of the '891 patent.

Moreover, the Examiner has used conclusory language in addressing the Appellants' claim elements with respect to the average molecular weight of the polyorganosiloxane block represented by formula $-(\text{SiR}^1_2\text{O})_a\text{SiR}^1_2-$, the mass percentage of block copolymer (A) represented by the polyorganosiloxane block, the average molecular weight of the polyoxyalkylene block represented by formula $-(\text{C}_2\text{H}_4\text{O})_{b1}(\text{C}_3\text{H}_6\text{O})_{b2}-$, and the average molecular weight of block copolymer (A) itself. For example, the Examiner contends that the "d" integer of the '891 patent may be repeated up to 400 times, and the BC subunit of the '891 is greater than one. Clearly, thousands of alternatives are encompassed by these two teachings alone without considering the presence or absence of optional moieties or selection of particular substituents, yet the Examiner contends that based on the language that a unit may be repeated up to 400 times that "it would be obvious to optimize the mass of the polyorganosiloxane block to the mass of the copolymer . . ." (See page 5 of the Examiner's answer). In weighing the totality of the circumstances, including the number of species encompassed by the genus taking into consideration all of the variables possible, such conclusory assertions fail to support a prima facie case of obviousness. The Examiner is again reminded that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006). The Examiner has failed to set forth any articulated reasoning with some rational underpinning as to why one of skill in

the art would select copolymer (A) or (B) individually, let alone a combination of copolymers (A) and (B), as claimed in the subject application, to form a composition for hair in view of the genus disclosed for foam stabilizers in the '891 patent.

Finally, Appellants note that, like in the Appeal Brief, these arguments relate merely to claimed copolymer (A), yet are equally applicable to claimed copolymer (B), which is also a species of the genus disclosed by the '891 patent and is also claimed in the same independent claim as copolymer (A). Notably, to arrive at the claimed invention, not only would one of skill in the art have to modify the genus disclosed in the '891 patent to arrive at claimed copolymer (A), but he/she would also have to modify the genus disclosed in the '891 patent to arrive at a second species, i.e., claimed copolymer (B), and combine these two species of the disclosed genus of the '891 patent in the claimed amounts in a hair care composition. However, additional arguments relating to claimed copolymer (B) are not included herein, as such arguments are duplicative with those relating to claimed copolymer (A).

In view of the foregoing, the Appellants respectfully submit that the Examiner has failed to establish a *prima facie* case of obviousness of the instantly claimed invention, and respectfully submit that claim 1 is both novel and non-obvious over the prior art including over the '891 patent. As such, the Appellants submit that the claims are in condition for allowance and respectfully request such allowance. In addition, the Appellants also request rejoinder of withdrawn claims 4-14 because the Examiner's original reason for withdrawing these claims, i.e., an a posteriori lack of unity, is no longer applicable in view of the fact that claimed copolymer (A) is novel and nonobvious itself.

While it is believed that no additional fees are presently due, the Commissioner is authorized to charge the Deposit Account No. 08-2789, in the name of Howard & Howard Attorneys PLLC for any fees or credit the account for any overpayment.

Respectfully submitted,

HOWARD & HOWARD ATTORNEYS PLLC

May 28, 2010

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